UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/629,653	08/01/2000	Nicolas Vazquez	5150-45000	7618

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EXAMINER
KISS, ERIC B

ART UNIT	PAPER NUMBER
2122	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

	Office Action Summary	Application No. 09/629,653	Applicant(s) VAZQUEZ ET AL.
		Examiner Eric B. Kiss	Art Unit 2122

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>01 August 2000</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-26</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-26</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>01 August 2000</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1.   Claims 1-26 have been examined.

Information Disclosure Statement

2.   The information disclosure statement filed February 8, 2001, fails to comply with the

provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because "Withdrawn" is not a valid date (see

reference A3). It has been placed in the application file, but the information referred to therein

has not been considered as to the merits. Applicant is advised that the date of any re-submission

of any item of information contained in this information disclosure statement or the submission

of any missing element(s) will be the date of submission for purposes of determining compliance

with the requirements based on the time of filing the statement, including all certification

requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).

        Please note that Examiner-cited U.S. Patent No. 6,408,429 B1 (Ref. K in attached PTO-

892 Notice of References Cited) was issued on U.S. Patent Application No. 09/522,885, a

continuation of U.S. Patent Application No. 08/784,406 (corresponding to Applicant's cited

reference A3).

Drawings

3.   The drawings are objected to because reference number "12" in Fig. 2 should presumably

read --102--. A proposed drawing correction or corrected drawings are required in reply to the

Office action to avoid abandonment of the application. The objection to the drawings will not be

held in abeyance.

4.   Figures 1A, 1B, 2, and 4-11 should be designated by a legend such as --Prior Art--

because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing

correction or corrected drawings are required in reply to the Office action to avoid abandonment

of the application. The objection to the drawings will not be held in abeyance.

5.   In addition, reference is made to a "FieldPoint" in Fig. 1B as well as in page 12, lines 3-4,

but no reference number is assigned to this feature. Applicant is encouraged to include a

reference number to improve clarity and consistency in the figure and specification.

Specification

6.   The use of the trademarks JAVA, LABVIEW, VISUAL BASIC, VISUAL C++, IMAQ,

and LABWINDOWS, has been noted in this application. They should be capitalized wherever

they appear and be accompanied by generic terminology.

        Although the use of trademarks is permissible in patent applications, the proprietary

nature of the marks should be respected and every effort made to prevent their use in any manner

that might adversely affect their validity as trademarks.

Claim Objections

7.   Claim 8 is objected to because of the following informalities: "executte" in line 5 should

read --execute--. Appropriate correction is required.

8.   Claim 13 is objected to because of the following informalities: "requested" in line 4

should presumably read --requesting--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

9.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10.   Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for

failing to particularly point out and distinctly claim the subject matter which applicant regards as

the invention.

Claim 16 can be read as the image processing algorithm comprising itself or a

combination of itself and/or other algorithm types (an image analysis algorithm or a machine

vision algorithm). As such, claim 16 introduces new elements only as potential alternatives and

thus, fails to further limit the subject matter of the parent claim.

Claim Rejections - 35 USC § 102

11.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12.   Claims 1-6 and 9-26 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S.

Patent No. 6,298,474 to Blowers et al.

As per claims 1, 2, 16, 25, and 26, Blowers et al. disclose a computer-implemented

method for evaluating the performance of an image processing (or machine vision) algorithm,

the method comprising: performing one or more image processing (or machine vision) functions

on an image in response to user input (see column 2, lines 47-55); recording the one or more

image processing (or machine vision) functions, wherein the one or more image processing (or

machine vision) functions define an image processing (or machine vision) algorithm (task

sequence generation; see column 8, line 61 through column 9, line 15); executing the image

processing (or machine vision) algorithm in response to user input, wherein said executing the

image processing (or machine vision) algorithm comprises executing executable code associated

with each of said image processing (or machine vision) functions defining the algorithm

(executing the sequence; see column 9, lines 16-25); and measuring and displaying information

indicating an amount of time that elapses during said executing the image processing (or

machine vision) algorithm (see, for example, Fig. 9, along with the description of "TimeTaken"

in the table of column 13).

As per claim 3, Blowers et al. further disclose displaying information indicating a rate at

which the image processing algorithm is capable of processing images, based on the amount of

time that elapses during said executing the image processing algorithm (see, for example, Fig. 9,

along with the description of "GetMinimumTime" in the table of column 13).

As per claims 4 and 5, Blowers et al. further disclose for each individual image

processing function, measuring and displaying information indicating an amount of time that

elapses during said executing executable code associated with the individual image processing

function (see, for example, Fig. 9, along with the description of "TimeTaken" in the table of

column 13); wherein said measuring an amount of time that elapses during said executing the

image processing algorithm comprises summing the amounts of elapsed time for each individual

image processing function (see status bar message in Fig. 9 – "Completed Sequence in 135ms!").

As per claim 6, Blowers et al. further disclose receiving user input specifying an image

on which to perform said executing the image processing algorithm (specifying an image source

-- see column 3, lines 26-33; and lines 48-52; and acquiring an image – see column 9, lines 42-

43).

As per claim 9, Blowers et al. further disclose automatically generating a program that

implements the image processing algorithm (see column 3, lines 40-44).

As per claim 10, Blowers et al. further disclose the program calling the same executable code that executes when performing said executing executable code associated with each of said image processing functions defining the algorithm (see column 9, lines 13-25).

As per claim 11, Blowers et al. further disclose the program calling a portion of executable code corresponding to each of the image processing functions defining the algorithm (see column 8, line 61 through column 9, line 12); wherein the execution time of each portion of executable code corresponding to an image processing function has a proportional execution time to the executable code associated with the image processing function that execute when performing said executing executable code associated with each of said image processing functions defining the algorithm (the executable code inherently requires the execution time associated with the individual tasks and any additional time associated with overhead tasks, such as the database interactivity described in column 9, lines 18-25).

As per claims 12, 20, and 24 Blowers et al. further disclose automatically changing the image processing algorithm in order to reduce the execution time of the image processing algorithm (see, for example, column 13, lines 3-10, along with the description of "SetMaximumTime" in the table of column 13).

As per claim 13, Blowers et al. further disclose displaying information indicating suggested changes to the image processing algorithm in order to reduce the execution time of the image processing algorithm; receiving user input requesting the suggested changes to be made automatically; and automatically making the indicated changes to the image processing algorithm (see, for example, the "Stop Result By" and "Stop Result Count" fields in the "Blob Properties" dialog box of Fig. 7).

As per claim 14, Blowers et al. further disclose one or more of the image processing

functions having associated parameters; wherein automatically changing the image processing

algorithm comprises automatically changing a parameter value associated with an image

processing function (see, for example, column 13, lines 3-10, along with the description of

"SetMaximumTime" in the table of column 13).

As per claim 15, Blowers et al. further disclose measuring an amount of time that elapses

during said executing the image processing algorithm for each of a plurality of image processing

categories (see, for example, Fig. 9, along with the description of "TimeTaken" in the table of

column 13; the tasks of Blowers et al. include such categories as acquisition, control-flow, and

image data manipulation); and displaying information indicating the amount of time that elapses

during said executing the image processing algorithm for each of the plurality of image

processing categories (see "Time Taken" for various categories illustrated in Fig. 9).

As per claims 17-19 and 21-23, these are system memory medium versions of the

claimed methods discussed above (claims 1, 4, and 9, respectively), wherein all claim limitations

also have been addressed as set forth above. Blowers et al. further disclose such a system

comprising a processor and memory coupled to the processor as well as such a memory medium

for performing the aforementioned method steps (see Figs. 1 and 2; column 7, lines 22-34; and

column 2, line 47 through column 3, line 13).

Claim Rejections - 35 USC § 103

13.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

14.   Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent No. 6,298,474 to Blowers et al. in view of U.S. Patent No. 5,293,429 to Pizano et al.

        As per claim 7, Blowers et al. disclose such a method, (see disclosure applied above to

claim 1) but fail to expressly disclose performing the prescribed method steps on a plurality of

images and determining an average amount of time required to execute the image processing

algorithm. However, Pizano et al. teach determining an average amount of time required to

execute an image processing algorithm by using a plurality of input images (see column 11, lines

34-42). Therefore, it would have been obvious to one having ordinary skill in the computer art at

the time the invention was made to modify the method of Blowers et al. to include determining

an average amount of time required to execute an image processing algorithm by using a

plurality of input images as per the teachings of Pizano et al. One would be motivated to do so

to be able to benchmark an image processing system.

        As per claim 8, Blowers et al. disclose such a method, (see disclosure applied above to

claim 1) but fail to expressly disclose repeating said executing the image processing algorithm a

plurality of times; and determining an average amount of time required to execute the image

processing algorithm, based on the elapsed time measured for each repetition. However, Pizano

et al. teach determining an average amount of time required to execute an image processing

algorithm by using a plurality of input images and repeating execution of an image processing

algorithm (see column 11, lines 34-42). Therefore, it would have been obvious to one having

ordinary skill in the computer art at the time the invention was made to modify the method of

Blowers et al. to include determining an average amount of time required to execute an image

processing algorithm by using a plurality of input images and repeating execution of an image

processing algorithm (see column 11, lines 34-42) as per the teachings of Pizano et al. One

would be motivated to do so to be able to benchmark an image processing system.

Conclusion

15.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

In particular, U.S. Patent No. 6,408,429 B1 is cited because it is a continuation of U.S.

Patent Application No. 08/784,406, now withdrawn U.S. Patent No. 6,094,526 (Ref. A3 of the

information disclosure statement filed February 8, 2001).

16.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Eric B. Kiss whose telephone number is (703) 305-7737. The

examiner can normally be reached on Tue. - Fri., 7:30 am - 5:00 pm. The examiner can also be

reached on alternate Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Gregory Morse can be reached on (703) 308-4789.

Any response to this action should be mailed to:
> Commissioner of Patents and Trademarks
> Washington, DC 20231

Or faxed to:
> (703) 746-7239 (for formal communications intended for entry)
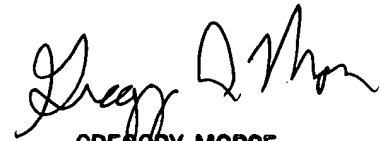
Or:
> (703) 746-7240 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, 22202, Fourth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (703) 305-3900.

EBK /EBk
February 24, 2003

GREGORY MORSE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100